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10/743,437

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EXAMINER

LIN, JAMES

ART UNIT

PAPER NUMBER

1762

MAIL DATE

DELIVERY MODE

05/30/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/743,437

Applicant(s)

SASAKI ET AL.

Examiner

Jimmy Lin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 14-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13, 20 and 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Examiner's Note

1. The specification defines "physical development" as the deposition of metal particles on nuclei of metal or metal compound by reduction of metal ions such as silver with a reducing agent (pg. 33, lines 11-14).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1, 10, 12, and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marutsuka (U.S. Publication 2001/0015279) in view of Kawata et al. (U.S. Patent 4,927,897).

Marutsuka discloses a method of forming a transparent electromagnetic radiation shield material (abstract). A resin solution containing a reduction metal is coated onto a substrate [0010]. The reduction metal [B] can be a silver salt [0034]. The silver salt is reduced, causing the salt to deposit as reduced metal within or at the surface of the coating. The deposited metal is the plating catalyst for the electroless process [0048]. The reduced metal particles form nuclei and react to cause blackening by deposition of the plating metal [0029]. Unnecessary portions of

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the electroless plating are then removed by treatment with an etching solution [0066]. As a result, portions where the electroless plating and the black portions have been removed are transparent.

Marutsuka does not explicitly teach that silver salt containing layer (i.e., the resin solution containing the reduction metal) is exposed and developed to form a metal silver portion and the light-transmitting portion. Marutsuka does teach that, instead of an etching process to form the desired conductive pattern, the silver salt layer can be patterned prior to electroless plating [0071].

Kawata teaches that salts of the Group IB metal (i.e., silver salts) can be exposed to a UV light to form metals that can function as a catalyst for electroless plating (col. 11, lines 27-66). The selection of something based on its known suitability for its intended use has been held to support a prima facie case of obviousness. *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have exposed UV light to convert the silver salt of Marutsuka to a plating catalyst (i.e., metal silver portion) according to the desired plating pattern and to have left the desired transparent portions of Marutsuka unexposed to the UV light (i.e., with a mask) with a reasonable expectation of success because Kawata teaches that UV light exposure is a suitable method of converting a silver salt to a plating catalyst. One would have been motivated to do so in order to have reduced the amount of plating material required.

Claim 10: Marutsuka teaches that the plating is performed by electroless plating, as discussed above.

Claim 12: Marutsuka teaches that the light-transmitting portion is removed (i.e., does not contain physical development nuclei), as discussed above.

Claim 21: Marutsuka teaches that the substrate can be a glass plate [0021].

5. Claims 1, 10, 12, and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marutsuka '279 in view of Nakabeppu et al. (JP 11-170421).

Marutsuka is discussed above. Marutsuka teaches that the silver salt layer can be patterned prior to electroless plating, but does not explicitly teach an exposure and development step to form a metal silver portion.

Nakabeppu teaches a method of forming a patterned plating catalyst that is used to form the pattern of the electroplated metal. A plating catalyst is deposited onto the substrate. An exposure and development step is performed on the plating catalyst layer to form a desired pattern. A metal layer is then electroplated onto the pattern [0015]. The plating catalyst can be silver and can be deposited as a silver salt [0023]. Because Marutsuka teaches that the plating catalyst layer can be patterned prior to electroplating, it would have been obvious to one of ordinary skill in the art at the time of invention to have used the exposure and development step of Nakabeppu to form the plating catalyst layer with a reasonable expectation of success.

6. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marutsuka '279 in view of Kawata '897 as applied to claim 1 above, and further in view of Whitmore (U.S. Patent 4,387,154).

Marutsuka and Kawata teach the use of silver salts, but do not explicitly teach the use of silver bromide. However, Whitmore teaches that silver bromide is a suitable material used in electroless plating (col. 17, lines 12-27; col. 18, lines 38-44). The selection of something based on its known suitability for its intended use has been held to support a prima facie case of obviousness. *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have used silver bromide as the particular silver salt of Marutsuka with a reasonable expectation of success because Whitmore teaches that such salts are suitable for electroless plating methods.

7. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marutsuka '279 in view of Nakabeppu '421 as applied to claim 1 above, and further in view of Whitmore '154 for substantially the same reasons as discussed immediately above.

8. Claims 4-5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marutsuka '279 in view of Kawata '897 and Whitmore '154 as applied to claim 2 above, and further in view of Habu et al. (U.S. Patent 4,160,669).

Marutsuka, Kawata, and Whitmore are discussed above, but do not explicitly teach that the silver halide contains palladium metal or rhodium or iridium compounds. However, Habu teaches that such additives in silver halide compositions shorten the necessary exposure time (col. 5, line 61-col. 6, line 21). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the palladium metal or rhodium or iridium compounds of Habu in the silver halide composition of Marutsuka and Whitmore with a reasonable expectation of success in order to have shortened the necessary exposure time.

Claim 7: Habu also teaches a silver halide grain size of about 100 nm (col. 5, lines 57-60).

9. Claims 4-5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marutsuka '279 in view of Nakabeppu '421 as applied to claim 2 above, and further in view of Habu '669 for substantially the same reasons as discussed immediately above.

10. Claims 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marutsuka '279 in view of Nakabeppu as applied to claim 1 above, and further in view of Poot et al. (U.S. Patent 3,989,522).

Marutsuka and Kawata are discussed above, but do not explicitly teach that the developing solution is a lith developer. However, the Examiner takes Official Notice that lith developers are well known developers for silver salt-containing layers. See, e.g., Poot, col. 5, lines 57-67. The selection of something based on its known suitability for its intended use has been held to support a *prima facie* case of obviousness. *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a lith developer as the particular developing composition with a reasonable expectation of success because they are well known as developing solutions.

Claim 6: Poot teaches further known features of silver halide compositions include Ag/binder ratios of 10/6 (col. 7, lines 66-col. 8, line 2).

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11. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Marutsuka '279 in view of Kawata '897 as applied to claim 1, and further in view of Monroe (U.S. Patent 4,362,796).

Marutsuka and Kawata are discussed above, but do not explicitly teach that more than half of the silver halide is converted to colloidal silver. However, Marutsuka and Kawata makes no indication that less than complete conversion is desired, and it is understood in the art that the amount of conversion is a function of the amount of energy applied (Monroe, col. 4, lines 40-50). Therefore, the degree of conversion affects the amount of energy applied and/or time of application to the photoemulsion. It has been held that the discovery of the optimum value of a result effective variable in a known process is ordinarily within the skill in the art. *In re Boesch and Slaney*, 205 USPQ 215 (CCPA 1980). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have optimized the process for the optimum combination of desired conversion to expense and time of energy application.

12. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Marutsuka '279 in view of Nakabeppu '421 as applied to claim 1 above, and further in view of Monroe '796 for substantially the same reasons as discussed immediately above.

13. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Marutsuka '279 in view of Kawata '897 as applied to claim 1 above, and further in view of Hasegawa (U.S. Patent 4,631,214).

Marutsuka and Kawata are discussed above, but do not explicitly teach that the electromagnetic shield is blackened after formation. However, Hasegawa teaches that it is advantageous in forming metal grid comprising an electromagnetic shield for transparent parts should be blackened in order to prevent reflections (col. 5, lines 3-32). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have blackened the conductive metal portion of Marutsuka in order to have reduced reflection in the transparent electromagnetic shield.

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14. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Marutsuka '279 in view of Nakabeppu '421 as applied to claim 1 above, and further in view of Hasegawa '214 for substantially the same reasons as discussed immediately above.

15. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Marutsuka '279 in view of Kawata '897 as applied to claim 1, and further in view of Glatkowski (U.S. Patent 7,060,241).

Marutsuka and Kawata are discussed above, but do not explicitly teach that shielding film has a surface resistance of $2.5 \Omega/\text{sq}$ or lower and/or the light-transmitting portion has a transmittance of 95% or higher. Marutsuka does teach that the transparent electromagnetic shielding is used for display devices (abstract).

Glatkowski teaches that electromagnetic shielding used for displays can have a surface resistance can be less than $100 \Omega/\text{sq}$ and a transmittance of at least 90% (col. 5, lines 24-67). The selection of something based on its known suitability for its intended use has been held to support a prima facie case of obviousness. *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have made the transparent electromagnetic shielding of Marutsuka with the surface resistance and transmittance of Glatkowski with a reasonable expectation of success because Glatkowski teaches that such shielding property ranges are suitable in the art of electromagnetic shielding for displays.

16. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Marutsuka '279 in view of Nakabeppu '421 as applied to claim 1 above, and further in view of Glatkowski '241 for substantially the same reasons as discussed immediately above.

Double Patenting

17. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined

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application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

18. Claims 1, 13, and 20 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-6 of copending Application No. 11/159218. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of '218 teach all the limitations of claims 1, 13, and 20 of the present application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

19. Applicant's arguments filed 4/2/2007 have been fully considered but they are not persuasive.

Claims 1, 10, 12, 20, and 21 as rejected over Marutsuka '279 and Kawata '897:

The Applicant argues on pg. 9 that Kawata fails to teach developing a silver salt-containing layer. However, the specification does not give the term "developing" a special meaning, so the broadest reasonable interpretation has been applied. The term "developing" has been interpreted to be inclusive of at least forming a layer. In Kawata, a silver salt-containing layer is formed, as discussed above.

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20. Applicant's arguments, see pg. 9, filed 4/2/2007, with respect to claim 8 have been fully considered and are persuasive. The rejection of the claim has been withdrawn. However, a new grounds of rejection has been provided above.

Conclusion

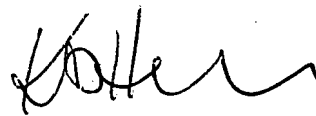
21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Postupack (U.S. Patent No. 4,845,310) teaches a method of exposure and development to form a colloidal silver film from a silver salt (col. 5, lines 12-19).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy Lin whose telephone number is 571-272-8902. The examiner can normally be reached on Monday thru Friday 8AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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KEITH HENDRICKS
PRIMARY EXAMINER